Grand Canyon

Vegetation Management – Restoration

National Park Service
U.S. Department of the Interior

Grand Canyon National Park
Arizona

High levels of human visitation along the Colorado River causes varying levels of resource degradation. In fragile desert and riparian environments such as those in the Colorado River corridor and side canyons, just a few passes by humans can cause long-term impacts to native vegetation and soil resources.

Social trails are easily created in the fragile environment of the inner canyon. Trampling pressure causes vegetation and biological soil crust loss, which only invites more use. The toll on native plants and soils has a direct relationship to increased erosion, wildlife habitat degradation and exotic plant introduction.

Efforts to obliterate these social trails include transplanting native plants and soil crust, installing checkdams to decrease gullying, spreading native seed and blocking trails using vertical mulch. These restoration efforts have been ongoing for years with the assistance of dedicated volunteers. However, some of the popular campsites and attraction sites experience continued social trailing each year despite the restoration efforts.

NPS staff and tribal representative installing checkdam.

Volunteer planting vertical mulch.

Crusts are well adapted to severe growing conditions, but poorly adapted to disturbance. Human trampling places a heavy toll on the integrity of biological soil crusts. In these fragile environments, one footstep may be all it takes to destroy the crusts. **Full recovery of crusts from disturbances is a slow process.**